AN ANALYSIS OF UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS IN SYMPTOMATIC CHOLELITHIASIS PATIENTS

Dissertation submitted to

THE TAMIL NADU DR.M.G.R MEDICAL UNIVERSITY

In partial fulfilment of the regulations

For the award of the degree of

M.S. (General Surgery)
BRANCH – I

KILPAUK MEDICAL COLLEGE

THE TAMIL NADU DR.M.G.R MEDICAL UNIVERSITY

CHENNAI, INDIA

APRIL 2019

DECLARATION BY THE CANDIDATE

I, **Dr.RITESH VENKATESH KUMAR**, solemnly. declare that this dissertation **"AN ANALYSIS OF UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS IN SYMPTOMATIC CHOLELITHIASIS PATIENTS"** is a bonafide work done by me in the Department of General Surgery, Government Royapettah hospital Kilpauk Medical College, Chennai under the guidance of **Prof.Dr.V.RAMALAKSHMI**, Head of the Department,Department of General Surgery, Government kilpauk medical college,Chennai ï 600010.

This dissertation is submitted to the Tamil Nadu Dr. M.G.R Medical university, Chennai in partial fulfilment of the university regulations for the award of M.S Degree (General Surgery) Branch ï I, General Surgery examination to be held in April 2019.

Place: Chennai

Date: (Dr.RITESH VENKATESH KUMAR)

CERTIFICATE

This is to certify that this dissertation entitled **"AN ANALYSIS OF UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS IN SYMPTOMATIC CHOLELITHIASIS PATIENTS"** is a bonafide original work of **Dr.RITESH VENKATESH KUMAR**, in partial fulfilment of the requirement for M.S (General Surgery) ï Branch ï I examination of the Tamil Nadu Dr. M.G.R Medical University to be held in April 2019.

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CERTIFICATE – II

This is to certify that this dissertation work titled **"AN ANALYSIS OF UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS IN SYMPTOMATIC CHOLELITHIASIS PATIENTS"** of the candidate **Dr.RITESH VENKATESH KUMAR** with registration number 221611165 for the award of Masters in Surgery in the branch of Branch I- General Surgery. I personally verified the www.urkund.com website for the purpose of plagiarism check. I found that the uploaded thesis file contains from introduction to conc**lusion pages and result shows 20**% of plagiarism in the dissertation.

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INCIDENCE OF UPPER GASTRO-INTESTINAL MALIGNANCY IN PATIENTS PRESENTING WITH DYSPEPSIA BY ENDOSCOPIC EVALUATION.pdf (D30670276)
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Instances where selected sources appear:

22

INSTITUTIONAL ETHICS COMMITTEE
GOVT. KILPAUK MEDICAL COLLEGE,
CHENNAI-10
Protocol ID. No. 60/2018 Meeting held on 13.02.2018

The Institutional Ethical Committee of Govt. Kilpauk Medical College, Chennai reviewed and discussed the application for approval ***"AN ANALYSIS OF UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS IN SYMPTOMATIC CHOLELITHIASIS PATIENTS"*** submitted by Dr.Ritesh Venkatesh Kumar, Post Graduate in M.S- General Surgery, Dept. of General Surgery, Govt. Kilpauk Medical College, Chennai-10.

The Proposal is **APPROVED.**

The Institutional Ethical Committee expects to be informed about the progress of the study any Adverse Drug Reaction Occurring in the Course of the study any change in the protocol and patient information /informed consent and asks to be provided a copy of the final report.

DEAN
Govt. Kilpauk Medical College,
Chennai-10.

ME I Sec> Ethical Committee

CONTENTS

INTRODUCTION

INTRODUCTION

Cholelithiasis is one of the most common problems encountered in surgery. It's an immense challenge to discriminate between upper gastrointestinal (UGI) symptoms due to gall stones or any other causes. These gastrointestinal symptoms have been related to gallstones but causal relationship has not been established yet. The persistence of abdominal symptoms even after cholecystectomy is highly discouraging for surgeons. Coexistence of concurrent upper gastrointestinal problems in gallstones disease patients may have attributed to the post cholecystectomy syndrome.Although, gallstone disease is asymptomatic in the vast majority of individuals, it is frequently accepted that removal of the gallbladder is the best treatment for symptomatic gallstone disease. However, less emphasis has been on patient selection and symptomatology of this disease in order to understand prevailing symptoms after surgery. Evaluation of gall stone disease is an immense challenge as to ascertain whether gallstones are responsible for symptoms or incidental findings. Differentiating between these two situations is important, because the prevalence of both conditions is common in the general population.

This study focuses on the yield of upper gastrointestinal endoscopy as an investigative modality to find out other associated disorders of upper gastrointestinal tract in patients with ultra-sonogram proven gallstones presenting with dyspeptic symptoms. The objective of this study was to analyze the use of upper gastrointestinal endoscopy (UGE) as a pre-operative investigative tool in gallstone disease patients presenting with chronic dyspepsia.

There has been a marked rise in the incidence of gall stones in India over the past decade , the likely causes being the changes in lifestyle and also the advances in imaging techniques now available with us. Most surveys show that silent gall stones heavily outnumber the symptomatic ones. Silent gallstones are diagnosed as incidental findings most commonly by abdominal ultrasound done for various unrelated disorders. The previous controversy regarding the management of silent gall stones has been resolved by various prospective studies which have shown that the vast majority of silent gall stones will not cause symptoms or complication during later life. What we are concerned with are the symptomatic gall stones . The symptomatology of gall stone disease is varied often non specific. The symptoms may be acute or chronic. Chronic symptoms are usually dyspeptic classically referred to as flatulent dyspepsia. In these patients with chronic symptoms, it is important to stress that demonstration of gall stones does not exclude other disorders which may be responsible for the symptoms.

A careful clinical evaluation together with appropriate investigation protocol is essential in all patients with chronic symptoms and ultrasonically diagnosed gall stones this is especially important for

selection of patients for elective laparoscopic cholecystectomy. This study focuses on the yield of pre ï op upper gastrointestinal endoscopy as an investigative modality to find out other associated disorders of upper gastrointestinal tract in patients with ultrasonogram proven gall stones presenting with chronic dyspeptic symptoms.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

On reviewing the literature regarding the role of pre operative upper gastrointestinal endoscopy for symptomatic cholelithiasis patients, Townstead et al states that ñThe diagnosis of symptomatic cholelithiasis needs two findings 1. Abdominal pain similar to biliary colic and 2.presence of Gall stones. The presence of symptoms pain attributable to gall bladder is required to consider any treatment for gall stones. Patients with no symptoms (2/3rd of patients with gallstones) will develop symptoms at a low rate and complications at even lower rate. In patients with no episodic pain characteristic of biliary colic ,other diagnosis should be sought. Other conditions leading to acute upper abdominal pain that should be included in the differential diagnosis are gastro-oesophageal reflux disease, acute pancreatitis, peptic ulcer disease or irritable bowel syndrome. Other studies to rule these conditions should be done in patients with cholelithiasis and atypical symptomsò

Cuschieri et al states that ñThe symptomatology of cholelithiasis is variable . Often non specific, the symptoms might be acute, chronic or totally absent when cholelithiasis are diagnosed as an incidental finding during the investigation of patients for other disorders. In patients having chronic

symptoms , it is important that the demonstration of cholelithiasis by oral cholecystography/ultrasound scanning does not exclude other disorders which can be responsible for the symptoms and a careful clinical evaluation ,along with the correct investigative protocol ,is necessary in all patients with chronic symptoms and ultrasonically confirmed cholelithiasis. This is very important in the choosing of patients for elective cholecystectomy. The common other coexisting diseases are colonic motility disorders and diverticular disease, gastritis and peptic ulcer disease, reflux esophagitis and hiatus hernia, pancreatitis, colonic cancer, renal disease, ischemic heart disease. Therefore in addition to ultrasonography, an upper gastrointestinal endoscopy or barium series and in some situations a barium enema is necessary in patients undergoing elective cholecystectomy for chronic symptomsò

In a study by Ure at al (1992) ,endoscopy of the upper digestive tract was done in 376 patients with symptomatic cholelithiasis before elective laparoscopic cholecystectomy. Abnormalities were detected in 60 patients (16.0 per cent); which are peptic ulcer (*n* = 14), gastric erosions (*n* = 15) and oesophagitis (*n* = 11). Thirty patients were given medical treatment and two by endoscopic polypectomy. In four patients endoscopy led to cancellation of surgery; in another two the complaints continued to persist. Statistical analysis of 28 variables revealed few significant

differences in symptomology between patients with normal and those with abnormal findings on endoscopy. Thus concluded that routine preop endoscopy before laparoscopic cholecystectomy is neither clinically useful nor cost effective in patients with symptomatic cholelithiasis.

In a study by Dhaliwal et al(1996) Fifty imaging proved cases of cholelithiasis were subjected to upper gastrointestinal endoscopy. This was done to know the exact cause of symptoms both pre-operatively and postoperatively if necessary, and to know the incidence of silent gallstones. A relatively high incidence of associated upper G.I. problems were detected which includes chronic gastritis 20 percent, oesophagitis 20 percent, chronic duodenitis 8 percent, hiatus hernia 6 percent, patulous oesophagogastric junction 10 percent. Post-operative medical treatment given related to lesion decreased the incidence of post-cholecystectomy symptoms.

AIM OF STUDY

AIM OF THE STUDY

The aim of the study is to know the frequency of alternative diagnosis of significant disease by upper gastrointestinal endoscopy in patients with ultrasound proven cholelithiasis having complaints of chronic dyspeptic symptoms .

OBJECTIVES

1. To study the prevalence of dyspeptic symptoms in patients with symptomatic cholelithiasis

2. To know the other common upper gastrointestinal pathologies Detected on upper gastrointestinal endoscopy in all cholelithiasis patients with dyspepsia.

3. To study the age distribution of clinically significant lesions on upper gastrointestinal endoscopy in cholelithiasis patients presenting with dyspepsia.

4. To study the sex distribution of various lesions in upper gastrointestinal endoscopy in patients.

5. to emphasize the importance of upper gastro intestinal endosopy as a routine pre ï operative investigation in patients presenting with dyspepsia and cholelithiasis.

HYPOTHESIS

HYPOTHESIS

1. The incidence of clinically significant lesions in upper gastrointestinal endoscopy in cholelithiasis patients presenting with chronic dyspeptic symptoms is low compared to incidence of normal study .

2. The prevalence of clinically significant lesions in endoscopy in these symptomatic cholelithiasis patients is moderately higher in women compared to men.

3. The prevalence of clinically significant lesions in these patients increases with age.

MATERIALS AND METHODS

MATERIALS AND METHODS

SITE OF STUDY

The study was conducted in General Surgery department

at Government royapettah hospital kilpauk medical

college.

PERIOD OF STUDY:

The study was conducted from march 2018 to august 2018.

INCLUSION CRITERIA:

1. Patients of age above 15 years of age
2. Patients having single or multiple stones in gall bladder shown only on ultrasound.
3. Patients havng any one or more of the following symptoms
    a. pain or discomfort in upper abdomen
    b. nausea or vomiting
    c. early satiety
    d. bloating sensation or fullness of abdomen
4. Patients who have given written consent and willing to participate.

Exclusion criteria

1. Patients age <15years
2. Patients having acute abdomen and / or biliary colicky pain
3. Patients whose general condition is unstable.
4. Patients not willing to participate or willing to sign written consent form.

Ethical committee approval

The study was submitted for approval of ethical committee meeting at Deans chamber at Government kilpauk Medical College hospital and approval was obtained.

Sample size

166 patients comprising of both males and females

Selection of study subjects:

Patients presenting to the General Surgery out patient department and patients referred from other departments with symptomatic cholelithiasis who satisfies the inclusion criteria are included in the study .

Tools used:

Flexible endoscope

In all flexible endoscopic systems light is transmitted through the endoscope shaft in order to illuminate the surface which is examined. The reflected image is conveyed back to endoscope through one of the two different modalities which are- fibre optic or electronics.

Basically it has a control head and a flexible shaft along with manoeuvrable tip. The head is connected to a light source through a cord and through which pass other tubes transmitting water for irrigation and suction. The suction channel is also used for passing of diagnostic tools and therapeutic devices .

Procedure of study:

The patients who fulfils the inclusion criteria who are attending the surgical out patient block or referred to surgery department from other departments are selected for study.

History elicited with a proforma, physical examination is done and endoscopy is performed in the general surgery endoscopy room in new surgical block . Prior to the procedure, informed consent was obtained.

Patient preparation

Patients taking part in the study were kept nil oral for at least 6 hours before the endoscopy. Prior to the study eye glasses and dentures were removed. No Prophylactic antibiotics were given . Prior to study,an intra venous access was obtained with a wide bore i. v line. Intravenous sedation was not used in the study. Topical 1 % lignocaine jelly was applied to the endoscope so that the gag reflex was suppressed as it comes in contact with posterior pharyngeal wall. The patient was made to lie in lateral decubitus position with slight elevation of head on a pillow.

Diagnostic technique

The 120 cm forward viewing endoscope is preferred over the routine diagnostic endoscopy. A well trained assistant stands near the patient head end during whole of examination. He or she protects the airway with suction throughout the examination. And also he holds endoscope when inserted and also maintains the position of the mouth piece. After properly preparing and comforting the patient and ensuring that the equipment is in proper working condition , the tip of endoscope is lubricated and inserted directly into the esophagus.

Intubation is best done under direct vision by advancing the endoscope over the tongue past the uvula and epiglottis and then posterior to the cricoarytenoid. By this the tip of the endoscope is placed near the upper esophageal sphincter as it relaxes it allows the entry into the cervical esophagus as patient swallows.

Once inside the esophagus the endoscope is advanced under direct vision till proximal duodenum taking care of the mucosa both in insertion and withdrawal. Inspection is usually better during withdrawal when the viscera is adequately distended with air , this is usually the best time for detailed examination and for taking biopsy from lesions noted during inspection.

During procedure of insertion the distance from incisors to the various land marks like the cricopharyngeal and lower esophageal sphincter , pylorus and the superior duodenal angle are noted down . The endoscope never advanced without direct vision and when in doubt, its withdrawn.

The endoscopy of the upper gastrointestinal tract is mainly performed by single handed technique. The left hand is used to control the up down knob and air/water and suction buttons and the right hand

inserts, withdraws or rotates the shaft . As and then required the right hand can be taken off the shaft and used to manipulate the left/right control knob.

The endoscope is advanced to esophagogastric junction Z line where the squamous epithelium meets the columnar gastric epithelium. The line should be within 2 cm of the diaphragmatic pinch cock which is the diaphragmatic hiatus. The point can be accentuated by asking the patient to sniff under the vision. The gastric cardia is entered by advancing through esophagogastric junction in direct vision. For proper orientation left tip deflection can be used.

After aspirating all gastric contents the gastric walls are surveyed by combination of tip deflection as well as shaft rotation . The endoscopy is advanced parallel to the longitudinal gastric folds along the stomach curvature. As the endoscope enters into the antrum, it gives an end on view of the pylorus, the passage through pylorus can be seen as well as felt and this is facilitated by use of single handed technique. The entry into the duodenum is confirmed by its pale granular mucosa. Lastly the second portion of duodenum is entered by advancing to the superior duodenal angle and simultaneously deflecting the tip as well as rotating shaft to right. Paradoxically withdrawal of the endoscope at this point advances the scope down the duodenum as the tip turns round the superior duodenal angle. All areas should be carefully assessed as the scope is slowly withdrawn.

Within antrum either prior to entering or while withdrawing the endoscope should be retroflexed by simultaneously flexing tip up to 180 while advancing the shaft. In this portion the tip can be rotated 180 in either direction so that fundus and cardia are visualised. In this retroflexed position the endoscope can be withdrawn to assess the cardia.

Complications:

Complications can vary from minor to life threatening, so it is necessary to have some measure of severity. The degree of patientõs disturbance may be used to measure complications.

Mild ï Events needing hospital stay for 1-3 days

Moderate ï hospital stay -4-9 days

Severe ï Hospital Stay>10 days, or require surgery

Fatal ï death caused due to the procedure

Specific events

Hypoxia ought to be detected early by careful nursing surveillance with help of pulse oximetry.

Pulmonary aspiration - the risk increases with retained food residue (e.g. achalasia,pyloric stenosis) , and in those having active bleeding. Bleeding may occur ï during and after endoscopy ï from pre-existing lesions (e.g. varices) or due to endoscopic manoeuvres (biopsy , polypectomy) or ,maybe due to retching from a Mallory Weiss tear . The risk of bleeding is more in patients with coagulopathy , and in those who are on anti coagulants and (possibly) anti-platelet agents.

Perforation is the most dreadful complication of upper gastrointestinal endoscopy. It is rare, but most commonly occurs near the neck and is more common in elderly patients the risk can be minimised with gentle endoscope insertion under direct vision.

Cardiac dysrhythmias are extremely rare, and need prompt recognition and further treatment.

Infection- endoscopes (and accessories) are main sources for the transmission of infection from patient to patient(ex- H.pylori , Salmonella, Hepatitis). This risk can be eliminated by proper attention to detail in cleaning and disinfection.

Recognition of lesions

Esophagitis

The earliest visible changes is mucosal congestion and edema which obscure the normal fine vascular pattern. At later advanced stage the mucosa would be friable and bleeds on touch ; there will be patches of exudate and areas of reddness or ulceration , usually along long axis of esophagus. The process culminates in a symmetrical stricture above which the mucosa appears normal. In Barrettôs esophagitis red gastric type mucosa would extend >2 cm above the diaphragmatic hiatus initially in longitudinal stripes or plaques, it can coalesce to involve the full circumference. Monilial esophagitis is recognised by white spots or plaques.

Esophageal carcinoma:

It causes asymmetrical stenosis, with areas of exuberant abnormal mucosa and occasionally an irregular ulcer with raised edges. .

Carcinoma of gastric fundus may extend the lower end of esophagus and a correct diagnosis is easily made if the scope would be passed through the stricture so that retroverted views of the cardia can be made out.

Stomach

Gastric erosions and gastric ulcer are the commonest lesions.

Gastric erosions: lesion is small < 5 mm in size and shallow, with no signs of scarring it is an erosion. Acute erosions are common antrum and can be capped or partially obscured by clots. Edematous erosions would be small, smooth, umblicated raised areas, often in chains near the folds of the gastric body. When they are in numbers the condition has been called ǿchronic erosive gastritisô

Gastric ulcers are commonly single and most commonly seen on lesser curvature at or above the angulus. It is classically symmetrical with smooth margins and a clean base. Multiple punched out ulcers are common in patients who are on NSAID therapy.

Gastric malignancy

If an ulcer with raised irregular margins, a lumpy hemorrhagic base or a mucosal abnormality around the ulcer. Mucosal folds around the ulcer would not reach upto the margin malignancy is suspected.

Duodenum :

Duodenal ulcers whether current or previous commonly cause persistent deformity of pyloric ring. They occur more commonly in the anterior and posterior walls of the bulb and are commonly multiple. When active they are surrounding area is edematous and congested. Scarring commonly results in a characteristic shelf like deformity of the duodenum which divides the bulb and may produce a pseudo diverticulum; a small linear ulcer or scar is found running on the apex of the fold.

Duodenitis: areas of mucosal congestion with spotty white exudates (salt and pepper ulceration) merge into even less common macroscopic appearances labelled as duodenitis.

Hiatus hernia

The position of the diaphragmatic hiatus can be checked by asking the patient to take a deep breath and is measured as the distance from the incisors. In all patient the relationship of the Z line to the diaphragmatic pinch cock varies during an endoscopy. In normal patients, the Z line is often seen 1 cm above the diaphragm. Hiatus hernia is considered if the Z line is more than 2 cm above the hiatus.

RESULTS AND OBSERVATIONS

RESULTS AND OBSERVATIONS

Socio demographic characteristics of subjects

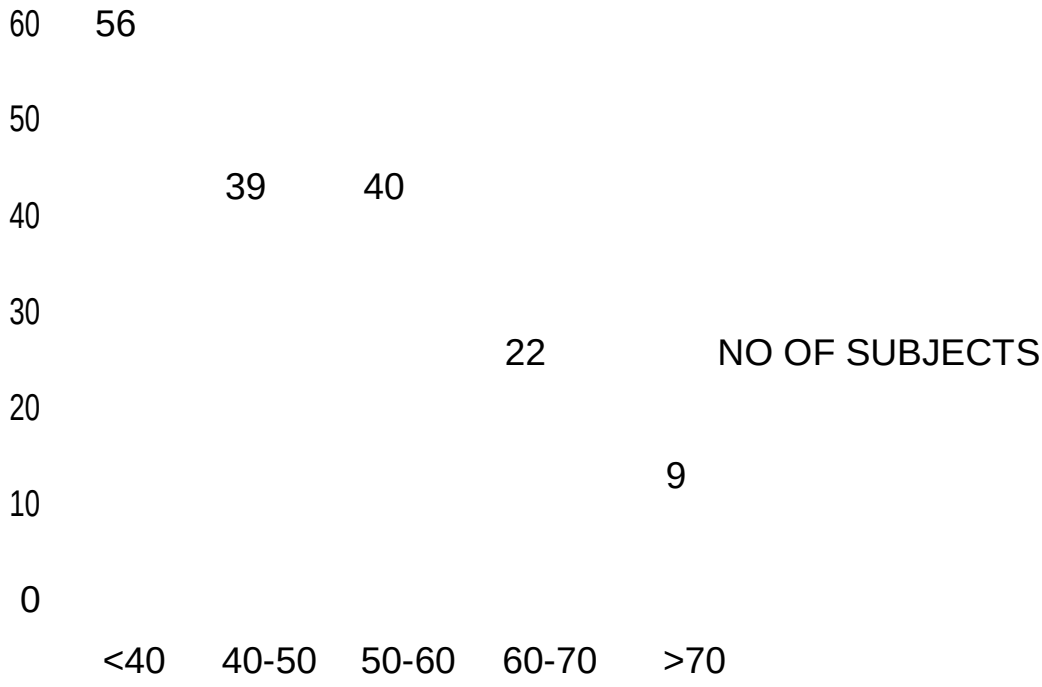
1. AGE DISTRIBUTION OF TOTAL SUBJECTS

TABLE 1

AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	56	33.7
40 – 50	39	23.4
50 – 60	40	24.1
60-70	22	13.3
>70	09	0.05

Subjects < 40 years of age predominated the study group comprising 33.7% of the total.

AGE DISTRIBUTION OF TOTAL SUBJECTS



Subjects below the age of 40 years comprised the majority of the study population

2. SEX DISTRIBUTION

TABLE 2

SEX	NO OF SUBJECTS	PERCENTAGE
MALE	73	43.9
FEMALE	93	56.0

Females comprised the majority (56%) of the study population

SEX DISTRIBUTION OF SUBJECTS

FEMALE	56%
MALE	44%

Females comprised the majority (56%) of the study population

3. AGE DISTRIBUTION IN MALE SUBJECTS

TABLE 3

AGE (in years)	NO OF SUBJECTS	PERCENTAGE
< 40	18	10.8
40-50	21	12.6
50-60	20	12.0
60-70	09	5.4
>70	04	2.4

Among the male subjects, the majority was in the age group of 40-50 years.

4. AGE DISTRIBUTION IN FEMALE SUBJECTS

TABLE 4

AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	36	21.7
40-50	19	11.4
50-60	18	10.8
60-70	15	9.0
>70	06	3.6

Among the female subjects, the majority (21.7 % of the total population) were under the age of 40 years.

5. DISTRIBUTION OF ENDOSCOPIC FINDINGS IN ALL SUBJECTS

TABLE 5

ENDOSCOPIC FINDING	NO OF SUBJECTS	PERCENTAGE
NORMAL STUDY	77	46.4
SIGNIFICANT LESIONS	89	53.6

Significant lesions was found in the majority i.e. 53.6 % of the total study population.

DISTRIBUTION OF ENDOSCOPIC FINDINGS IN ALL SUBJECTS

NORMAL	54
SIGNIFICANT LESIONS	46

Significant lesions was found in the majority i.e. 53.6 % of the total study population.

6. DISTRIBUTION OF ENDOSCOPIC FINDINGS AMONG SIGNIFICANT LESIONS

TABLE 6

ENDOSCOPIC FINDING	NO OF SUBJECTS	PERCENTAGE
REFLUX ESOPHAGITIS	35	21.1
GASTRITIS	21	12.6
GASTRIC ULCER	07	4.2
DUODENITIS	13	7.8
DUODENAL ULCER	10	6.0
HIATUS HERNIA	03	1.8

Among the significant lesions found on endoscopy,reflux esophagitis (21.1%)was the commonest followed by gastritis(12.6%).

7. DISTRIBUTION OF ENDOSCOPIC FINDINGS IN MALE SUBJECTS

TABLE 7

ENDOSCOPIC FINDING	NO OF SUBJECTS	PERCENTAGE
NORMAL STUDY	37	22.3
SIGNIFICANT LESIONS	40	24.0

Among the male subjects, the incidence of a significant lesion was slightly more than incidence of normal study

8. DISTRIBUTION OF SIGNIFICANT LESIONS IN ENDOSCOPY IN MALE SUBJECTS

TABLE 8

ENDOSCOPIC FINDING	NO OF SUBJECTS	PERCENTAGE
REFLUX ESOPHAGITIS	16	9.6
GASTRITIS	09	5.4
GASTRIC ULCER	03	1.8
DUODENITIS	02	1.2
DUODENAL ULCER	04	2.4
HIATUS HERNIA	01	0.6

Among the significant lesions in male subjects, Reflux esophagitis and Gastritis was found in majority of cases.

9. DISTRIBUTION OF ENDOSCOPIC FINDINGS IN FEMALE SUBJECTS

TABLE 9

ENDOSCOPIC FINDING	NO OF SUBJECTS	PERCENTAGE
NORMAL STUDY	40	24.1
SIGNIFICANT LESIONS	53	31.8

Among the female subjects, the incidence of a significant lesion was more than incidence of normal study

10.DISTRIBUTION OF SIGNIFICANT LESIONS IN ENDOSCOPY IN FEMALE SUBJECTS

TABLE 10

ENDOSCOPIC FINDING	NO OF SUBJECTS	PERCENTAGE
REFLUX ESOPHAGITIS	19	11.5
GASTRITIS	12	7.2
GASTRIC ULCER	04	2.4
DUODENITIS	11	6.6
DUODENAL ULCER	06	3.6
HIATUS HERNIA	02	1.2

Among the significant lesions in female subjects, Reflux esophagitis and Gastritis was the commonest findings followed by Duodenitis.

11. AGE DISTRIBUTION OF ENDOSCOPIC FINDINGS OF TOTAL SUBJECTS

TABLE 11

ENDOSCOPIC FINDINGS	AGE(in years)									
	< 40		40-50		50-60		60-70		>70	
	n	%	n	%	n	%	n	%	n	%
Reflux esophagitis	15	9.0	07	4.2	06	3.6	05	3.0	05	3.0
Gastritis	06	3.6	05	3.0	05	3.0	02	1.2	02	1.2
Gastric ulcer	00	00	02	1.2	02	1.2	02	1.2	01	0.6
Duodenitis	06	3.6	02	1.2	02	1.2	02	1.2	01	0.6
Duodenal ulcer	02	1.2	04	2.4	01	0.6	01	0.6	00	00
Hiatus hernia	00		02	1.2	00	00	00	00	00	00

12. AGE DISTRIBUTION OF ENDOSCOPIC FINDINGS OF MALE SUBJECTS

TABLE 12

ENDOSCOPIC FINDINGS	AGE(in years)									
	< 40		40-50		50-60		60-70		>70	
	n	%	n	%	n	%	N	%	n	%
Reflux Esophagitis	5	3.0	5	3.0	3	1.8	2	1.2	1	0.6
Gastritis	3	1.8	3	1.8	2	1.2	1	0.6	0	00
Gastric ulcers	0	00	1	0.6	1	0.6	1	0.6	0	00
Duodenitis	1	0.6	1	0.6	0	00	0	00	0	00
Duodenal ulcer	1	0.6	2	1.2	1	0.6	0	00	0	00
Hiatus hernia	0	00	0	00	0	00	0	00	0	00

13. AGE DISTRIBUTION OF ENDOSCOPIC FINDINGS OF FEMALE SUBJECTS

TABLE 13

ENDOSCOPIC FINDINGS	AGE(in years)									
	< 40		40-50		50-60		60-70		>70	
	n	%	n	%	n	%	n	%	n	%
Reflux esophagitis	10	6.0	2	1.2	3	1.8	3	1.8	1	0.6
Gastritis	3	1.8	2	1.2	5	3.0	1	0.6	1	0.6
Gastric ulcer	0	00	1	0.6	1	0.6	1	0.6	1	0.6
Duodenitis	5	3.0	1	0.6	2	1.2	2	1.2	1	0.6
Duodenal ulcer	1	0.6	2	1.2	2	1.2	1	0.6	0	0.6
Hiatus hernia	0	00	2	1.2	0	00	0	00	0	00

NORMAL STUDY ON ENDOSCOPY

14. AGE DISTRIBUTION OF SUBJECTS WITH NORMAL STUDY

TABLE 14

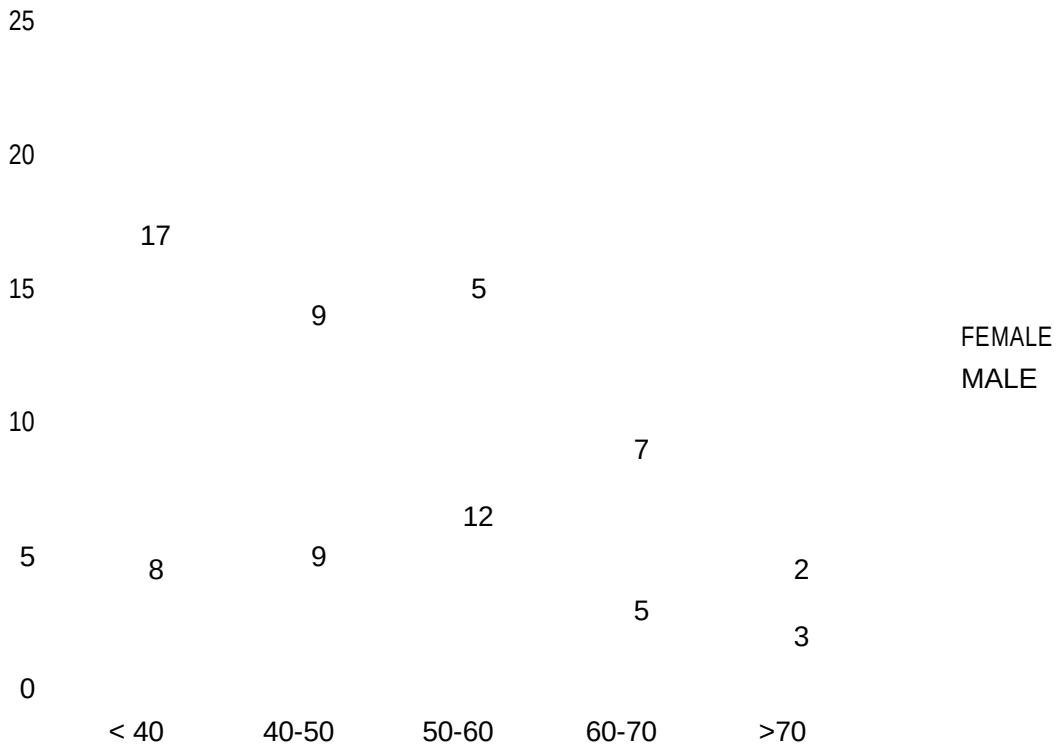
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	25	15.1
40 – 50	18	10.8
50 -60	17	10.2
60-70	12	7.2
>70	05	3.0

15. SEX DISTRIBUTION OF SUBJECTS WITH NORMAL STUDY

TABLE 15

AGE (in years)	MALES		FEMALES	
	n	%	n	%
<40	8	4.8	17	10.3
40-50	9	5.4	9	5.4
50-60	12	7,2	5	3.0
60-70	5	3.0	7	4.2
>70	3	1.8	2	1.2

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH NORMAL STUDY



Among patients who had an normal study on endoscopy, Females were more common who were less than 40 years of age.

16. AGE DISTRIBUTION OF SUBJECTS WITH REFLUX ESOPHAGITIS

TABLE 16

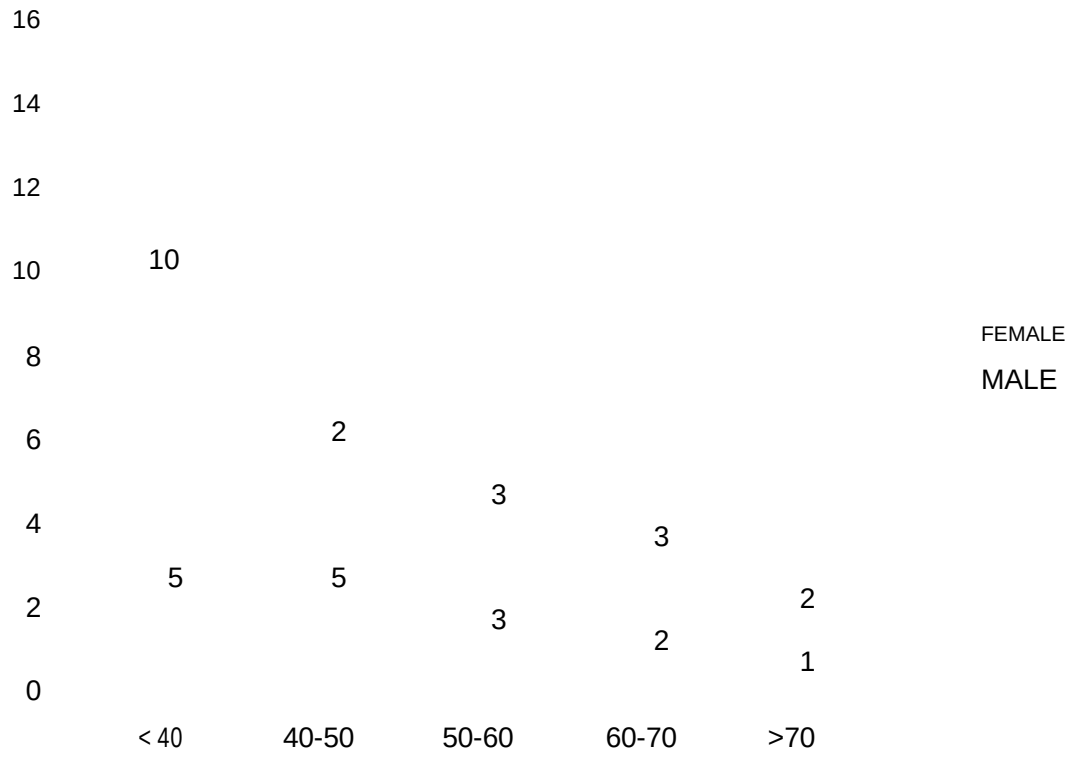
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	15	9.0
40 – 50	7	4.2
50 -60	6	3.6
60-70	5	3.0
>70	2	1.2

17. SEX DISTRIBUTION OF SUBJECTS WITH REFLUX ESOPHAGITIS

TABLE 17

AGE (in years)	MALES		FEMALES	
	n	%	N	%
<40	5	3.0	10	6.0
40-50	5	3.0	2	1.2
50-60	3	1.8	3	1.8
60-70	2	1.2	3	1.8
>70	1	0.6	1	0.6

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH REFLUX ESOPHAGITIS



Among patients with reflux esophagitis, the majority were females

Whose age was less than 40 years.

18. AGE DISTRIBUTION OF SUBJECTS WITH GASTRITIS

TABLE 18

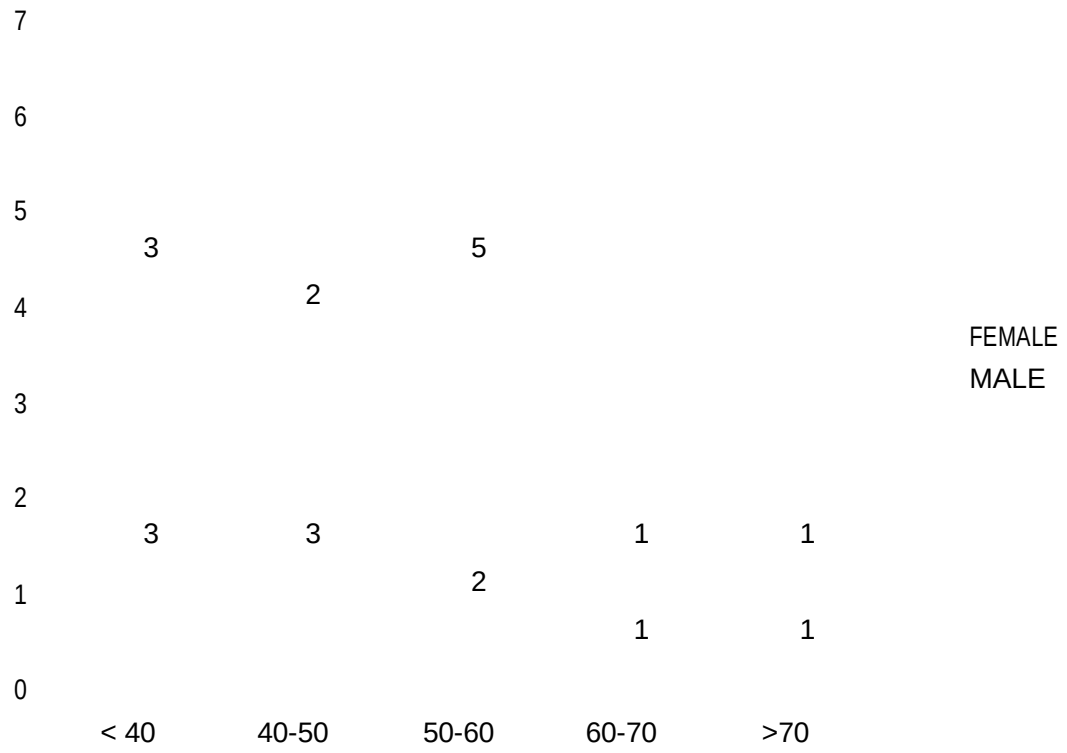
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	6	3.6
40 – 50	5	3.0
50 -60	7	4.2
60-70	2	1.2
>70	1	0.6

19. SEX DISTRIBUTION OF SUBJECTS WITH GASTRITIS

TABLE 19

AGE (in years)	MALES		FEMALES	
	n	%	n	%
<40	3	1.8	3	1.8
40-50	3	1.8	2	1.2
50-60	2	1.2	5	3.0
60-70	1	0.6	1	0.6
>70	0	00	1	0.6

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH GASTRITIS



Among the patients with gastritis, most of them were females in the age group of 50-60 years of age.

20. AGE DISTRIBUTION OF SUBJECTS WITH GASTRIC ULCER

TABLE 20

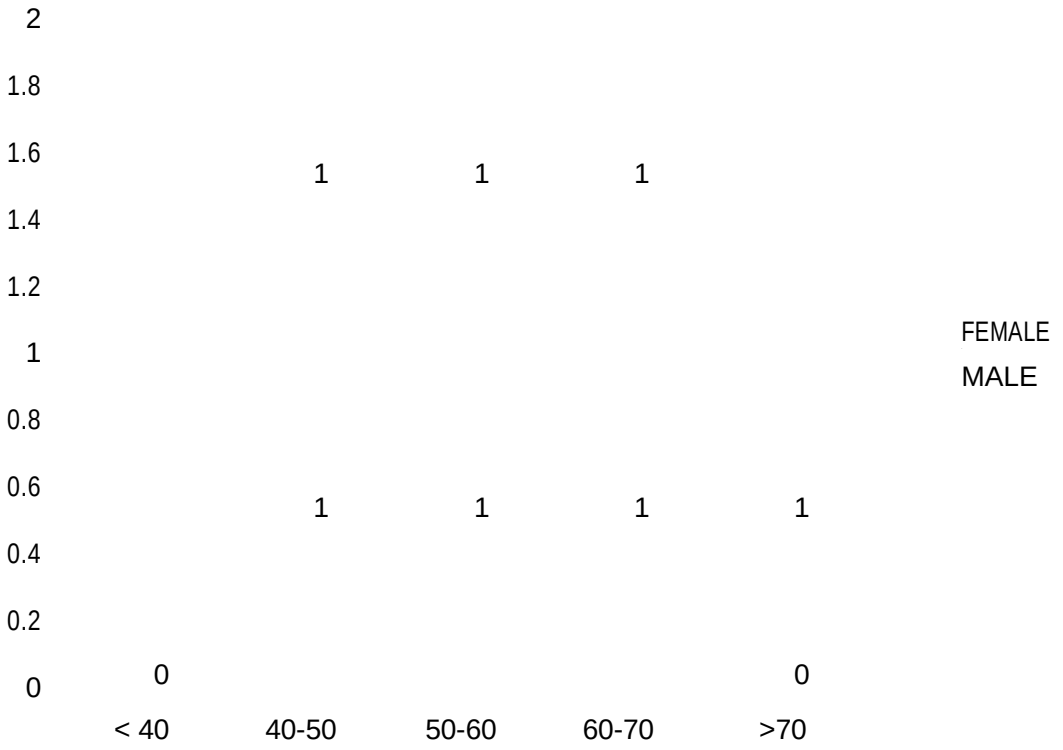
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	0	0.0
40 – 50	2	1.2
50 -60	2	1.2
60-70	2	1.2
>70	1	0.6

21. SEX DISTRIBUTION OF SUBJECTS WITH GASTRIC ULCER

TABLE 21

AGE (in years)	MALES		FEMALES	
	n	%	n	%
<40	0	00	0	0.0
40-50	1	0.6	1	0.6
50-60	1	0.6	1	0.6
60-70	1	0.6	1	0.6
>70	0	0.0	1	0.6

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH GASTRIC ULCER



Among the patients with gastric ulcer on endoscopy, there was an nearly equal incidence in both males and females of age group of 40-70years.

22. AGE DISTRIBUTION OF SUBJECTS WITH DUODENITIS

TABLE 22

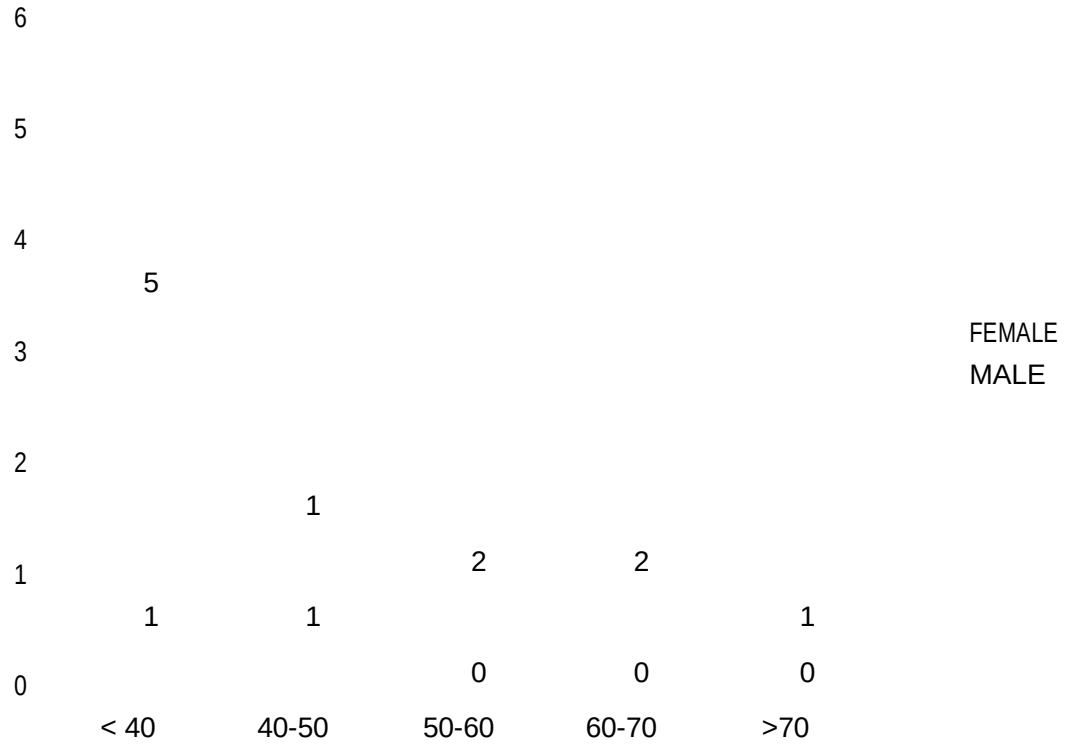
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	6	3.6
40 – 50	2	1.2
50 -60	2	1.2
60-70	2	1.2
>70	1	0.6

23. SEX DISTRIBUTION OF SUBJECTS WITH DUODENITIS

TABLE 23

AGE (in years)	MALES		FEMALES	
	n	%	n	%
<40	1	0.6	5	3.0
40-50	1	0.6	1	0.6
50-60	0	0.0	2	1.2
60-70	0	0.0	2	1.2
>70	0	0.0	1	0.6

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH DUODENITIS



Among the patients who were having duodenitis on endoscopy, most of them were females less than 40 years of age.

24. AGE DISTRIBUTION OF SUBJECTS WITH DUODENAL ULCER

TABLE 24

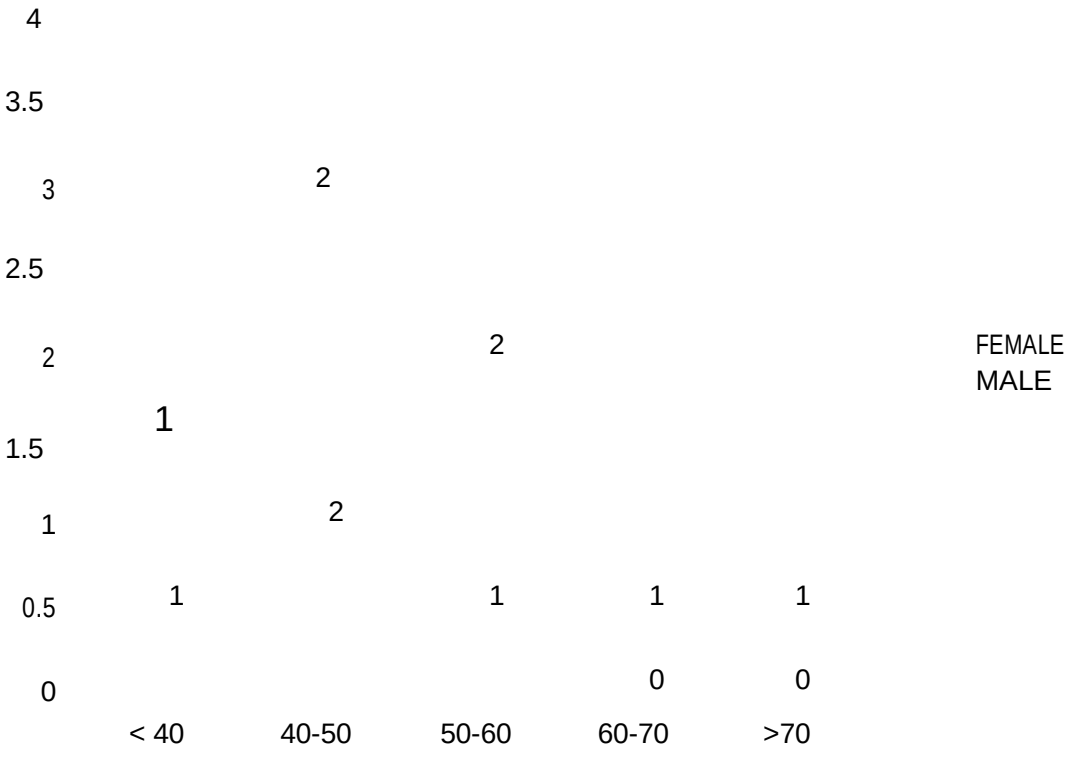
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	2	1.2
40 – 50	4	2.4
50 -60	3	1.8
60-70	1	0.6
>70	0	0.0

25. SEX DISTRIBUTION OF SUBJECTS WITH DUODENAL ULCER

TABLE 25

AGE (in years)	MALES		FEMALES	
	n	%	n	%
<40	1	0.6	1	0.6
40-50	2	1.2	2	1.2
50-60	1	0.6	2	1.2
60-70	0	0.0	1	0.6
>70	0	0.0	0	0.0

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH DUODENAL ULCER



Among the patients with duodenal ulcer on endoscopy, the most of them were females and the incidence was higher in the age group of 40-50 years in both sexes.

26. AGE DISTRIBUTION OF SUBJECTS WITH HIATUS HERNIA

TABLE 26

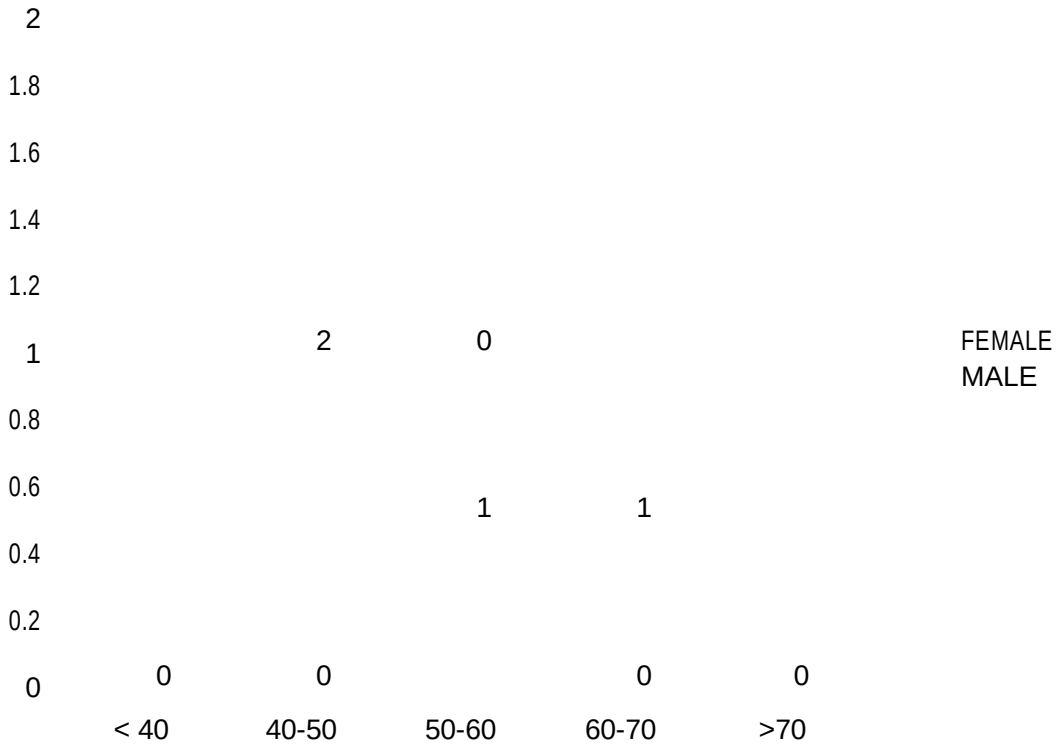
AGE (in years)	NO OF SUBJECTS	PERCENTAGE
<40	0	0.0
40 – 50	2	1.2
50 -60	1	0.6
60-70	0	0.0
>70	0	0.0

27. SEX DISTRIBUTION OF SUBJECTS WITH HIATUS HERNIA

TABLE 27

AGE (in years)	MALES		FEMALES	
	N	%	n	%
<40	0	0.0	0	0.0
40-50	0	0.0	2	1.2
50-60	1	0.6	0	0.0
60-70	0	0.0	0	0.0
>70	0	0.0	0	0.0

AGE AND SEX DISTRIBUTION OF SUBJECTS WITH HIATUS HERNIA



Among the patients with hiatus hernia, the majority were females in the age group of 40-50 years.

DISCUSSION

DISCUSSION

The patients with dyspepsia and ultrasound proven gall stones had their age, sex and endoscopic findings recorded in a Proforma. The prevalence of significant lesions in endoscopy was noted down and their age and sex distribution were charted. All the data tables and interpretations are shown at the observations and the results chapter.

Now we shall discuss the results of the current study with literature background and compare with hypothesis.

Hypothesis 1:

(The incidence of clinically significant disease in upper gastrointestinal endoscopy in cholelithiasis patients having dyspeptic symptoms is less when compared to incidence of normal study)

Out of 166 patients with symptomatic cholelithiasis normal study of upper gastrointestinal tract was found in 77 patients which constitutes 46.4% of the total patients.

The result does not go in accordance with study of Ure et al which said that 84 % of patients with symptomatic cholelithiasis patients had no significant focal or structural lesion in upper gastrointestinal tract at endoscopy.

Out the 166 patients 89 (table 5) had significant findings forming 53.6 % of the symptomatic cholelithiasis population .This result do not corelate accordance with study of Ure et al which says that an organic cause is present only in 16 % of patients with symptomatic cholelithiasis. This difference is explained by the fact that 1. The sample size of the current study is relatively small compared to other studies.
2.Government hospital being a tertiary centre specialised in surgical field the referrals would have more significant findings as the referrals patients would have already failed some sort of conservative treatment offered by general practitioner in the local community.

But the current study goes in accordance to the study of Dhaliwal et al which conclusion was that significant findings were present in 58 % of symptomatic cholelithiasis.

Hypothesis 2:

(The prevalence of positive findings is more in women compared to men)

Among 166 patients, 93 subjects were females forming 56 % of the total subjects. Among 93 females, 53 of them had significant findings in endoscopy which is 56.9 % .

Hypothesis 3:

(The prevalence of positive findings in symptomatic cholelithiasis patients increases with age)

Out of 166 patients, 89 patients had significant lesions on endoscopy which constitutes 53.6 % of total subjects.

Out of 89 patients, the prevalence of positive findings was 33.7, 23.4, 24.1, 13.3 and 0.05% in the age frequencies of <40, 40-50, 50-60, 60-70 and >70 years. Therefore the prevalence of positive findings was found to be highest in the < 40 years age group.

Out of various endoscopically significant findings,reflux esophagitis and gastritis forms 21.1 % and 12.6% of symptomatic cholelithiasis.

This result goes in accordance with Dhaliwal et al which states that chronic gastritis and reflux esophagitis forms 40 % (20% each) of total patients. Duodenitis found in 7.8% of symptomatic cholelithiasis patients and the incidence of chronic duodenitis was 8% in the study by Dhaliwal et al.

Gastric ulcer and duodenal ulcer both formed 10.2 % of the total symptomatic cholelithiasis patients.

In the current study, the incidence of Hiatus Hernia was 1.8% while in the study by Dhaliwal et al it was found to be 8%.

SUMMARY

SUMMARY

The current study is an attempt to know the yield of upper gastrointestinal endoscopy in symptomatic cholelithiasis patients in South Indian population and to study the incidence of various organic causes of dyspepsia among these patients.

The sample in current study is of 166 dyspeptic patients with males and females attending the general surgery out patient block at government royapettah hospital or those referred from other Departments in government royapettah hospital or from other hospitals.

All these patients underwent an upper gastrointestinal endoscopy at the General surgery department endoscopy room and their findings were noted in proforma and details of their socio-demographic variables,physical examination and history were noted .

All the patients underwent cholecystectomy after they were diagnosed but follow up was not done . The data analysed and the prevalence of positive findings, their age and sex distribution tabulated.

The prevalence of significant lesions was found to be more than normal study in the current study. The prevalence of positive findings

was more in females compared to males. The prevalence also decreased with age and prevalence was highest in age group of less than 40 years.

The most common significant findings on endoscopy in patients with positive findings were Reflux esophagitis and Gastritis in both females and males. The other common significant lesions were Duodenitis, Duodenal ulcer, Gastric ulcer and Hiatus Hernia in order of prevalence.

CONCLUSION

CONCLUSION

The prevalence of significant lesions in upper gastrointestinal evaluation of symptomatic cholelithiasis patients having chronic dyspeptic symptoms on endoscopy is relatively more than prevalence of normal findings.

The prevalence of significant lesions was higher in females than males in symptomatic patients.

The prevalence of significant lesions was highest in the age group of less than 40 years.

Therefore upper gastrointestinal endoscopy has a vital role in the preop evaluation and investigation symptomatic cholelithiasis patients.

LIMITATIONS AND SUGGESTIONS

LIMITATIONS AND SUGGESTIONS

The current study is an attempt to emphasise that pre op endoscopy of all symptomatic cholelithiasis patients presenting with chronic dyspeptic symptoms is an useful investigation as it suggests that the most of the patients have significant lesions on endoscopy. Whether they are just incidental findings or whether they are the cause of the patients symptoms in the first place is a subject of debate. Therefore a useful suggestion for these patients would be to medically treat those patients who are having positive findings on endoscopy for a certain period and look for resolution of symptoms, with cholecystectomy can be reserved for those patients who still continue to have symptoms.

The size of the sample in the current study is small therefore the study results cannot be applied to the general population.

The study was conducted in a tertiary centre and therefore many patients might have been referred here after a failure of medical treatment and hence that may account for more significant lesions.

Inter observer variations may also interfere with the yield of the findings at endoscopy.

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BIBLIOGRAPHY

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PROFORMA

NAME : AGE: SEX : M/F

IP NO: ENDOSCOPY NO:

OCCUPATION:

RESIDENCE:

SYMPTOMS:

1. PAIN /DISCOMFORT IN UPPER ABDOMEN Y/N
2. NAUSEA Y/N
3. VOMITING Y/N
4. EARLY SATIETY Y/N
5. EPIGASTRIC FULLNESS Y/N
6. REGURGITATION Y/N

ULTRASOUND FINDINGS:

UPPER GI ENDOSCOPY FINDINGS:

BIOPSY TAKEN / NOT :

MASTER CHART

S.NO	NAME	AGE	SEX	ENDOSCOPIC FINDING
1	KANNAMALA	48	F	3
2	GOWRI	24	F	1
3	PREMA	36	F	2
4	NAGARAJ	32	M	3
5	PARVATHY	45	F	3
6	DURAIRAJ	35	M	7
7	ARUN KUMAR	24	M	5
8	DURAI RAJ	45	M	1
9	MUTHU	44	M	5
10	RENUKA	48	F	2
11	PANDIAN	30	M	6
12	DHANALAKSHMI	67	F	3
13.	SARAMMA	35	F	2
14	SUSILA	45	F	1
15	RAJENDRAN	50	M	1
16	VENKATRAGAVAN	55	M	1
17	VARADHAN	50	M	1
18	JANCY	40	F	1
19	SHANKARAN	65	M	1
20	DAVAMANI	52	M	1
21	GANALAKSHMI	48	F	1
22	NARAYANA RAO	33	M	1
23	GOPAL	45	M	3
24	JANAKI	42	F	3
25	CHINNAPPA	60	F	6
26	SHYAMALA	58	F	2
27	KAVERI	45	F	1
28	PARVATHY	70	F	2
29	JAMUNA	55	F	3
30	KAMALAKANNAN	54	M	1
31	ALAMELU	40	F	1
32	JAREENA	50	F	2
33	SABITHA	60	F	1
35	SURESH BABU	45	M	1
36	NATESAN	34	M	1
37	MANI	45	M	1
38	SARIKA	27	F	2
39	MEENAKSHI	34	F	1

40	JOHN	29	M	1
41	ELLAMMAL	60	F	1
42	RAJA	45	M	1
43	KALAVATHI	40	F	1
44	MUTHULAKSHMI	45	F	3
45	KALYANI	33	F	1
46	SEKAR	35	M	2
47	RAJESH	20	M	1
48	MUNUSAMY	65	M	2
49	PATCHAIAMMAL	38	F	6
50	RAMA	52	F	2
51	SIVALINGAM	60	M	2
52	MANIMEGALAI	35	M	1
53	PONNUSAMY	55	M	1
54	VELU	60	M	1
55	SEETHA	30	F	2
56	CHELLAMMAL	60	F	6
57	SATHURNISHA	26	F	1
58	SELVARAJAN	58	M	3
59	RAVI	41	M	1
60	VIJAYA	45	F	1
61	PERIYAPILLAI	33	M	3
62	LALITHA	29	F	3
63	RAJI	59	M	3
64	BOMMI	40	F	3
65	KUPPUSAMY	58	M	1
66	SHARATHA	35	F	2
67	LOGANATHAN	46	M	2
68	MALAR	27	F	1
69	SULAIMAN	27	M	1
70	SUBRAMANI	60	M	3
71	MANU	50	M	1
72	ASHA	35	F	2
73	CHELLAMMAL	40	F	1
74	RAVINDRAN	48	M	2
75	SARASWATHY	40	M	2
76	RAMESH	56	M	1
77	RADA	45	F	2
78	SAMPATH	67	F	1
79	YASMIN	18	F	3
80	DEVI	52	F	2
81	SHANTHA	56	F	3
82	SUBBAIYA	43	M	6
83	MANIKANDAN	40	M	4
84	TAMILSEVI	38	F	1
85	RANJITHAM	65	F	1
86	LAKSHMI	70	F	4
87	VEDAVASAM	60	F	1

88	MURUGAN	30	M	3
89	SUSEELA	37	F	5
90	PALRAJ	64	M	1
91	MUNIVAMMAL	50	F	5
92	ABBAS	30	M	1
93	CHANDRA	40	F	1
94	BABU	23	M	1
95	SAMIDURAI	52	M	2
96	KUMAR	35	M	2
97	SHANMUGAM	43	F	2
98	MEENA	45	F	4
99	NARAYANAN	53	M	6
100	NEELA	25	F	4
101	SASI KUMAR	27	M	3
102	YASODHA	65	F	1
103	SELVARAJ	28	M	1
104	VELANKANNI	22	F	3
105	SEKAR	41	M	3
106	BHARATHI	43	F	1
107	RAJESHWARI	18	F	1
108	KASTHURI	43	F	1
109	KARUPPAIYA	39	M	4
110	RAVANAMMA	56	F	1
111	SUNDARAM	32	M	2
112	KOMALA	65	F	6
113	ANNIYAMMAL	70	F	5
114	HUSSAIN	35	M	1
115	SENTHIL	37	M	2
116	VENI	50	F	5
117	PARASURAMAN	45	M	1
118	RAMAN	46	M	4
119	DEVI	34	F	1
120	GIRIJA	46	F	5
121	SARLA	70	F	6
122	RAVI	45	M	2
123	SULOCHANA	35	F	1
124	SELVI	45	F	5
125	MARY CLARA	67	F	7
126	ELUMALAI	54	M	1
127	ANANDAN	56	M	1
128	JAYAKAR	23	M	2
129	ANANDA VELU	43	M	3
130	VADIVEL	67	M	1
131	GOVINDAMMAL	43	F	5
132	RAMANI	53	F	5
133	LAKSHMI	29	F	7
134	RANI	45	F	1
135	LOGANATHAN	43	M	3

136	MUNUSAMY	45	M	4
137	GEETHA	34	F	1
138	GOPAL	69	M	2
139	ANUSYA	23	F	5
140	KUPPUSAMY	36	M	6
141	JANAKI	45	F	5
142	LOGU	49	M	1
143	THAYARAMMAL	54	F	2
144	NEELA	74	F	1
145	SUNDARAMURTHY	67	M	1
146	JOTHI	32	F	5
147	PREM	27	M	3
148	GANESH	32	M	1
149	SENTHIL KUMAR	32	M	2
150	DAYANIDHI	45	M	6
151	KAMALA	45	F	5
152	BEGUM BEE	39	F	3
153	AMMU	29	F	1
154	RATHINAM	57	M	2
155	RASATHI	32	F	5
156	SAVITHRI	37	F	7
157	MOHAMMED	45	M	1
158	KALA	45	F	6
159	VARAMMA	54	F	3
160	SYLVIA	36	F	5
161	KALAVATHY	45	F	1
162	GANAPATHY	35	M	1
163	MANGAMMAL	48	F	5
164	KALYANI	43	F	5
165	SARASWATHI	65	F	2
166	ANDAL	56	F	6

KEY TO MASTER CHART

1. NORMAL STUDY
2. REFLUX ESOPHAGITIS
3. GASTRITIS
4. GASTRIC ULCER
5. DUODENITIS
6. DUODENAL ULCER
7. HIATUS HERNIA
8. ESOPHAGEAL CARCINOMA

   GASTRIC CARCINOMA

சுயஒப்புதல்படிவம்

ஆய்வுசெய்யப்படும் தலைப்பு "AN STUDY OF UPPER GASTROINTESTINAL ENDOSCOPY FINDINGS IN SYMPTOMATIC CHOLELITHIASIS PATIENTS"

பங்குபெறுபவரின் பெயர் :

பங்குபெறுபவரின் வயது : பங்குபெறுபவரின் எண் :

மேலேகுறிப்பிட்டுள்ளமருத்துவஆய்வின்விவரங்கள்எனக்குவிளக்கப்பட்டது.
நான்இவ்வாய்வில்தன்னிச்சையாகபங்கேற்கிறேன்.
எந்தகாரணத்தினாலோஎந்தசட்டசிக்கலுக்கும்உட்படாமல்நான்இவ்வாய்வி
ல்இருந்துவிலகிக்கொள்ளல்லாம்என்றும்அறிந்துகொண்டேன்.

இந்தஆய்வுசம்பந்தமாகவோ,
இதைசார்ந்துமேலும்ஆய்வுமேற்கொள்ளும்போதும்இந்தஆய்வில்பங்குபெ
றும்மருத்துவர்என்னுடையமருத்துவஅறிக்கைகளைபார்ப்பதற்குஎன்அனும
திதேவையில்லைஎனஅறிந்துகொள்கிறேன்.
இந்தஆய்வின்மூலம்கிடைக்கும்தகவலையோ,
முடிவையோபயன்படுத்திக்கொள்ளமறுக்கமாட்டேன்.

இந்தஆய்வில்பங்குகொள்ளஒப்புக்கொள்கிறேன்.
இந்தஆய்வைமேற்கொள்ளும்மருத்துவஅணிக்குஉண்மையுடன்இருப்பேன்
என்றும்உறுதியளிக்கிறேன்.

பங்கேற்பவரின் கையொப்பம்

இடம் :

தேதி :

பங்கேற்ப ஆய்வாளரின்கையொப்பம்